

# Acute Conjunctivitis with Episcleritis and Anterior Uveitis Linked to Adiaspiromycosis and Freshwater Sponges, Amazon Region, Brazil, 2005

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## CME ACTIVITY

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### Learning Objectives

Upon completion of this activity, participants will be able to:

- Describe the mechanism of infection for adiaspiromycosis.
- Identify the age group most susceptible to ocular adiaspiromycosis.
- Describe presenting symptoms associated with ocular adiaspiromycosis.
- Describe the frequency of ocular lesions associated with adiaspiromycosis.
- Identify risk factors for ocular adiaspiromycosis.

### Editor

**Beverly Merritt**, Technical Writer-Editor, *Emerging Infectious Diseases*. Disclosure: *Beverly Merritt has disclosed no relevant financial relationships.*

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Disclosures: *Tatiana M. Lanzieri, MD, MSc, has disclosed that she has been employed by GlaxoSmithKline since April 2008, but this study was conducted while she was working in the Brazilian Ministry of Health. Márcia O. Mendes, BSc, MSc; Mario A.P. Moraes, MD; Ernesto I.M. Renoirer, ND; Marta H.P. Dantas, ND, MSc; Carlos F. Fonseca, MD; Expedito J.A. Luna, MD; and Douglas L. Hatch, MD, MPH, have disclosed no relevant financial relationships.*

We conducted an epidemiologic investigation of an outbreak of ocular disease among children to determine whether the disease was linked to *Emmonsia* sp., a rarely-reported fungus and an agent of adiaspiromycosis. Using an unmatched case–control study design, we compared

case-patients with asymptomatic controls randomly selected from the population. Scleral biopsies were analyzed microscopically. Of 5,084 children examined, 99 case-patients were identified; mean age (+1 SD) was 11.0 ± 4.4 years. Symptoms included photophobia (57%), ocular pain (42%), and blurred vision (40%). In the multivariate analysis, risk factors included diving in the Araguaia River (odds ratio 5.2; 95% confidence interval 2.4–12.0). Microscopy identified foreign bodies consistent with adiaconidia. This outbreak probably resulted from foreign-body–type reactions to adiaspiromycosis conidia after initial irritation caused by conjunctival contact with spicules of sponges in the river. Symptomatic children responded to corticosteroid treatment. Adiaspiromycosis is a preventable cause of ocular disease in the Amazon region.

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633

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### Article Title

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### CME Questions

1. Which of the following is the *most* likely mechanism for disease associated with adiaspiromycosis?

- A. Conidia invasion
- B. Immune response
- C. Allergy
- D. Fungemia

2. Which of the following is the *most* common age group reported to be infected with ocular adiaspiromycosis in the initial case series of 17 patients in this article?

- A. Less than 5 years
- B. 5 to 15 years
- C. 16 to 25 years
- D. 26 to 35 years

3. Which of the following is *least* likely to be reported as an ocular-related symptom in patients with ocular disease associated with adiaspiromycosis?

- A. Conjunctival hyperemia
- B. Photophobia
- C. Blurred vision
- D. Excessive tearing

4. Which of the following *best* describes the frequency of bilateral corneal opacities in patients with confirmed ocular disease in this case series?

- A. 13%
- B. 20%
- C. 35%
- D. 80%

4. Which of the following is *least* likely to be a risk factor associated with ocular adiaspiromycosis in this case series?

- A. Diving in the Araguaia River
- B. Fishing in the Araguaia River
- C. Male gender
- D. Drinking Araguaia River water

### Activity Evaluation

1. The activity supported the learning objectives.

Strongly Disagree

1

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2. The material was organized clearly for learning to occur.

Strongly Disagree

1

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3. The content learned from this activity will impact my practice.

Strongly Disagree

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4. The activity was presented objectively and free of commercial bias.

Strongly Disagree

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685